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| 09/965,030 | 09/27/2001 | Yoshikatsu Niwa | 450100-03503 | 2594 |

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| EXAMINER |
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SHIN, KYUNG H

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| ART UNIT | PAPER NUMBER |
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2143

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/19/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/965,030

Applicant(s)

NIWA ET AL.

Examiner

Kyung H. Shin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9,10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is responding to application papers filed 1/29/2007. Claims **1, 2, 5, 6, 9, 10** are pending. Claims **3, 4, 7, 8, 11, 12** were canceled. Independent claims are **1, 5, 9**.

Response to Arguments

2. Applicant's arguments filed 1/29/07 have been fully considered but they are not persuasive.

The USC 112 rejection has been withdrawn based on Applicant's disclosure of amended limitations. (see Remarks Page 6)

Applicant argues that the referenced prior art does not disclose one or more buses for data transfers. (see Remarks Page 7)

Applicant argues that the referenced prior art does not disclose the capability “ ... combine Yeung, Bastiani, Takabatake, and Lappetelainen ... ”; “ ... no motivation in the prior art of record to modify an IEEE-1394 bus conforming to the BRAN specification to create the data transfer apparatus ... ”; “ ... nothing has been found within the knowledge within the level of ordinary skill in the art at the time the invention was made, to modify a person of ordinary skill in the art to combine the reference teachings to create the data transfer apparatus ... ” (see Remarks Page 8-9)

The Yeung, Bastiani, Takabatake, and Lappetelainen referenced prior art are all data transfer systems and are all equivalent art. Yeung discloses a data transfer system utilizing a serial bus (see Yeung col. 1, lines 12-16), Bastiani discloses (see Bastiani col. 2, lines 19-22), Takabatake discloses a data transfer system utilizing a serial bus (see Takabatake col. 3, lines 45-49), and Lappetelainen discloses a data transfer system utilizing a serial bus (see Lappetelainen col. 1, lines 46-51).

One of ordinary skill in the art would be motivated to employ Bastiani in order to provide and optimize a more robust communications protocol between systems and peripherals in an interconnected network environment. (see Bastiani col. 2, lines 19-22) Yeung discloses a method for determining whether at least one eligible route has required resources available for communications. (see Yeung col. 1, lines 59-61) Bastiani disclose the capability to determine whether a destination node is available and a communications path is available. (see Bastiani col. 10, line 66 - col. 11, line 3) In addition, there is motivation to combine Yeung and Bastiani to solve the same problem, which is the successful delivery of data over a network route (i.e. a communications path).

One of ordinary skill in the art would be motivated to employ Takabatake in order to interconnect IEEE 1394 buses (see Yeung col. 2, lines 53-56; col. 2, line 64 - col. 3, line 1: one bus for each port, multiple ports-multiple buses, first, second) to more effectively utilize wireless (i.e. radio) resources within an interconnected network environment (see Takabatake col. 1, lines 12-16), and to

employ Lappetelainen in order to effectively optimize performance of radio (i.e. mobile) based communications (see Lappetelainen col. 4, lines 52-5).

Yeung discloses communications utilizing the Internet (see Yeung col. 2, lines 41-43), and the usage of audio, video multimedia devices attached to the Yeung switch. (see Yeung col. 2, lines 36-41) In addition, there is motivation to combine Yeung with Takabatake and Lappetelainen to solve the same problem of successfully interconnecting dissimilar network protocols such as available within Internet network communications.

And, there is motivation to one of ordinary skill in the art to combine Yeung, Takabatake and Lappetelainen to enable the usage of audio and video data files.

The rejection for each independent and dependent claim includes a citation from the referenced prior art that discloses the basis for the rejection. Each obviousness combination clearly indicates the claim limitation the combined reference prior art teaches. In addition, a cited passage from the referenced prior art clearly indicates the motivation for the obviousness combination. Each obviousness combination's disclosure is equivalent to the applicant's claimed invention.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, the Applicant is reminded it must be recognized that any judgment on obviousness is in a sense

necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In conclusion, the examiner has considered the Applicant's remarks concerning the data transfer apparatus operational between two bus interfaces. All claims in Applicant's invention have been rejected as anticipatory or obvious based on the referenced prior art.

After the additional analysis of the applicant's invention, remarks, and an additional search of the available prior art, it was determined that the current set of prior art consisting of **Yeung (6,643,702)**, **Bastiani (6,636,922)**, **Takabatake (6,728,244)**, and **Lappetelainen (6,693,915)** discloses the applicant's invention including disclosures in Remarks dated January 29, 2007.

Claim Rejection – 35 USC § 103

3. **Claims 1, 2, 5, 6, 9, 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yeung** (US Patent No. 6,643,702) in view of **Bastiani et al.** (US Patent No. 6,636,922) and further in view of **Takabatake** (US Patent No. 6,728,244) and further in view of **Lappetelainen et al.** (US Patent No. 6,693,915).

Regarding Claims 1 (Currently Amended), 5 (Currently Amended), 9 (Currently Amended), Yeung discloses a data packet processing apparatus, network system, data transfer method for connecting a plurality of buses and for transmitting data through a first one of the plurality of buses to a second one of the plurality of buses, according to destination information related to the data, the data transfer apparatus being connected to the second bus through a second data transfer apparatus. (see Yeung col. 2, lines 44-56: “ ... a switch ... number of ingress ports and egress ports in the switch may vary depending on ... how many devices or buses are served by the switch ... ”) Yeung does not disclose determining that the destination node is not connected. However, Bastiani discloses a data transfer apparatus, network system, data transfer method for connecting buses the data transfer apparatus comprising:

- a) transferring means for transferring the data from the data transfer apparatus to the second data transfer apparatus according to the destination information;
(see Yeung col. 2, lines 44-56; col. 3, lines 5-12: data transfer between buses (i.e. input, output), **no** second data transfer apparatus)
- b) determining means for determining according to the destination information whether a node serving as a destination of the data is connected to the second bus, wherein, when the determining means determines that the node is not connected, a data transmission source receives a predetermined error information signal; (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path failure determination, destination node not connected (i.e. path failure),

predetermined alarm (i.e. action: error bits set, packet processed as error packet) completed)

- c) wherein at least one packet of the data, transmitted to the node that is not connected, is processed as an error packet; (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path failure notification, destination node not connected (i.e. path failure), predetermined alarm (i.e. action: error bits set, packet processed as error packet) completed) and
- d) wherein the destination information comprises a node ID and a bus ID. (see Bastiani col. 11, lines 36-40; col. 12, lines 22-24: device addressing (i.e. node ID, bus ID) utilized for communications ; col. 10, lines 59-63; col. 12, lines 39-43: interface (i.e. bus, port) addressing utilized)

Yeung does not disclose an IEEE 1394 bridge based on the BRAN specification.

- e) However, Lappetelainen discloses that the BRAN specification is equivalent to the HIPERLAN specification (see Lappetelainen col. 1, lines 46-51: HIPERLAN specification equal to BRAN specification) and Takabatake discloses an IEEE 1394 bridge based on the HIPERLAN specification. (see Takabatake col. 21, lines 49-53; col. 3, lines 56-61; col. 8, lines 24-29: HIPERLAN (High Performance Radio Access Network) specification and wireless IEEE 1394 standards for a network device used in data transmissions) Therefore, the combination of Takabatake and Lappetelainen discloses the data transfer apparatus according

to claims 1, 5, 9, wherein the data transfer apparatus is an IEEE-1394 bridge device conforming to the BRAN specification.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yeung to determine connection availability of destination node and to process communications failure as taught by Bastiani, and to utilize a wireless IEEE 1394 device operating as a bridge based on the BRAN (HIPERLAN) specification as taught by Takabatake and Lappetelainen. One of ordinary skill in the art would be motivated to employ Bastiani in order to provide and optimize a more robust communications protocol between systems and peripherals in an interconnected network environment (see Bastiani col. 2, lines 19-22: “ ... *providing an advanced serial protocol (ASP) that defines a more robust data transmission environment for communication between host computers and peripheral devices ...* ”), and to employ Takabatake in order to interconnect IEEE 1394 buses to more effectively utilize wireless (i.e. radio) resources within an interconnected network environment (see Takabatake col. 1, lines 12-16: “ ... *realizing data transfer between interconnected different networks by identifying packets on each network, managing correspondences of packets between different networks, and converting packets ...* ”), and to employ Lappetelainen in order to effectively optimize performance of radio based communications (see Lappetelainen col. 4, lines 52-57: “ ... *attain more effective utilization of the radio resources ... produce a more disturbance-free data transmission system ...* ”).

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Regarding Claims 2 (Currently Amended), 6 (Currently Amended), Yeung does not disclose the determination that the destination node exists on a network. However, Bastiani discloses the data transfer apparatus, network system, data transfer method according to claims 1, 5, wherein the means for determining determines according to the destination information whether the bus to which the node serving as the destination of the data is connected, exists on a network, and wherein when the bus does not exist, transmits predetermined error information to the data transmission source. (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path analysis and failure notification sequence or predetermined alarm (action) is completed when it is determined that destination node is not connected or path fault)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yeung to determine that the destination node is not connected and to process communications fault as taught by Bastiani. One of ordinary skill in the art would be motivated to employ Bastiani in order to provide and optimize a more robust communications protocols between systems and peripherals in an interconnected network environment. (see Bastiani col. 2, lines 19-22)

Regarding Claim 7 (Currently Amended), Yeung discloses the data transfer apparatus, network system, data transfer method according to claim 5, wherein the data transfer apparatus is connected to the second bus through a second data transfer apparatus, and the data transfer apparatus further comprises transfer means for transferring the data from the data transfer apparatus to the second data transfer apparatus according

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to the destination information. (see Yeung col. 2, lines 44-56: destination network node is another data processing apparatus)

Regarding Claim 10, Yeung does not disclose the determination that the destination node exists on a network. However, Bastiani discloses the data transfer apparatus, network system, data transfer method according to claim 9, wherein, in the second step, it is determined according to the destination information whether the bus to which the node serving as the destination of the data is connected, exists on a network, and when the bus does not exist, predetermined error information is transmitted to the data transmission source. (see Bastiani col. 9, lines 30-36; col. 34, lines 6-19: path analysis and failure notification sequence or predetermined alarm (action) is completed when it is determined that destination node is not connected or a communications path failure)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yeung to determine that the destination node is not connected and to process communications fault as taught by Bastiani. One of ordinary skill in the art would be motivated to employ Bastiani in order to provide and optimize a more robust communications protocols between systems and peripherals in an interconnected network environment. (see Bastiani col. 2, lines 19-22: "*... serial protocol ... that defines a more robust data transmission environment for communication between host computers and peripheral devices ...*")

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9:30 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

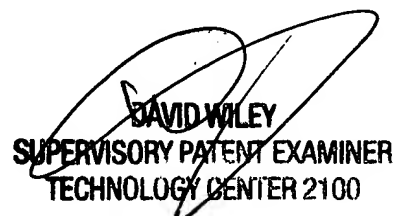
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K H S

Kyung H Shin
Patent Examiner
Art Unit 2143

KHS
April 15, 2007


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